A Blueprint for Learning
Science
Second Grade

The ***Blueprint for Learning*** is a companion document for the Tennessee Curriculum Standards which are located at www.tennessee.gov/education. Although the curriculum adopted by the State Board of Education in its entirety remains on the web for additional reference, this reformatted version makes the curriculum more accessible to classroom teachers.

Key features of the reformatted version are:

- All grades for each content area are provided in the printed manual.
- The skills within each grade are identified as to whether they are introduced, developed, or have been mastered and are now being maintained at that level.
- The skills correlating with the state criterion referenced test (CRT) are also identified for classroom instruction.
- In the Language Arts section, the assessed skills (performance indicators) are identified not only for the state's CRT in grades 3-8 but also for the writing assessment in grades 5 and 8.
- This guide makes the planning of instruction for students with varying abilities easier to accomplish.
- Teachers can plan and work together to improve school wide student achievement through curriculum integration across content areas and grade levels.
- Teachers can identify current grade level skills as well as those needed to prepare students for the next year.

Skills are coded and identified as Introduced (I), Developing (D), State CRT and Writing Assessed (A), and Mastered and Maintained (M).

- Introduced (I) skills are new skills presented at that grade level. Even though a skill is considered introduced at a grade level, some development would also occur.
- Developing (D) skills are skills that have been introduced at a previous grade level. At this stage of development the skills are being refined and expanded.
- Assessed (A) skills are those skills that are correlated to the state performance indicators for the CRT portion of the achievement test (grades 3-8) and the writing assessment (grades 5 and 8). The identified skills are formally assessed through the CRT; however, all skills are informally assessed in the classroom.
    - For the purpose of data reporting, assessed (A) skills are grouped into categories indicating related skills and knowledge. For example, grammar, mechanics, and usage are grouped together under the grammar (G) category. Each state assessed indicator included on the Blueprint carries a legend showing that it is assessed and indicating the category in which it will be reported (e.g., Assessed/Grammar=A/G).
- Mastered and Maintained (M) indicates a skill that has been introduced, developed, and assessed. Even though a skill may be formally assessed, the development and expansion of the skill still continues.

KEY
I = Introduced D = Developing A = State Assessed M = Mastered

REPORTING CATEGORY
SF = Structure & Function of Organisms ME = Motion & Forces, Forms of Energy E = Ecology M = Matter
LC = Life Cycles & Biological Change ER = Earth Features & Resources SC = Space, Weather, & Climate

Note: "A" indicates the state curriculum (CRT) assessment only.
All the skills ("I"…"D"…"A"…"M") are addressed in the classroom assessment.

SCIENCE
Second Grade

LIFE SCIENCE STANDARDS

Cell Structure and Function

The student will investigate the structure and function of plant and animal cells.

Key	Reporting Category	
D		Use magnifiers to study smaller parts of animals and identify their functions.
D		Use magnifiers to observe and describe what occurs when a plant or an animal loses a specific part.

Interactions Between Living Things and Their Environment

The student will investigate how living things interact with one another and with nonliving elements of their environment.

I		Categorize objects as living or nonliving.
D		Determine how animals interact with the living and nonliving elements in their environment through the senses.
I		Determine how organisms interact with the nonliving elements of their environment.
D		Recognize different types of pollutants.

Food Production and Energy for Life

The student will study the basic parts of plants, investigate how plants produce food, and discover that plants and animals use food to sustain life.

D		Compare how plants and animals satisfy their basic requirements for life.

Heredity and Reproduction

The student will understand the basic principles of inheritance.

I		Recognize that all living things come from other living things.
I		Match offspring with their parents.
I		Recognize that as an organism grows, its appearance may change.

Diversity and Adaptation Among Living Things

The student will understand that living things have characteristics that enable them to survive in their environment.

D		Provide specific examples of differences among animals of the same kind.
D		Classify an organism according to the environment in which it can best survive.

Biological Change

The student will understand that living things have changed over time.

I		Recognize that some plants and animals that formerly inhabited the earth are no longer present on earth.

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EARTH SCIENCE STANDARDS

Earth and Its Place in the Universe

The student will investigate the structure of the universe.

D		Recognize that there are innumerable stars in the nighttime sky that vary in brightness, color, and location.
D		Recognize that the sun is the brightest object in the sky and earth's closest star.
D		Determine the approximate time of day from the position of the sun in the sky.
I		Recognize that the phases of the moon occur in a predictable pattern.

Earth Features

The student will understand that the earth has many geological features that are constantly changing.

D		Recognize the earth's major geological features (e.g., mountains, oceans, and lakes).

Earth Resources

The student will investigate the properties, uses, and conservation of earth's resources.

I		Recognize the components of soil and sand.
I		Observe the properties of sand and soil.
D		Identify various methods to conserve earth resources (e.g., soil, trees, and water).

PHYSICAL SCIENCE STANDARDS

Forces and Motion

The student will investigate the effects of force on the movement of objects.

D		Recognize that objects fall unless supported.
I		Identify materials that are attracted to magnets.
D		Observe how changing the amount of weight affects a balanced system.

Structure and Properties of Matter

The student will investigate the characteristic properties of matter.

D		Identify physical properties that can be used to describe a material.
D		Describe ways in which a material can be changed.

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Interactions of Matter

The student will investigate the interactions of matter.

D		Recognize that when substances combine they may retain their individual properties (e.g., salt and pepper).
D		Recognize that when substances combine they may lose their individual properties (e.g., powdered drink mix with water).

Energy

The student will investigate energy and its uses.

D		Compare the heating and cooling rates of land, air, and water.

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